

Application No. 10/041,705

AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1. (Currently Amended) A surgical clip for retaining tissue and for delivery by an applicator of type having one or more force application members, the clip comprising:

a bending beam having two ends and a sufficient shape memory to generally return to a relaxed position and to hold the tissue together after being forcibly distorted to a stressed position;

at least two constraint segments having one end thereof operably coupled to a respective end of the bending beam, the constraint segments being sufficiently rigid to retain the tissue when the bending beam returns to the relaxed position;

a ridge portion defined on the bending beam such that the bending beam deforms from the stressed position to the relaxed position while retaining the at least two constraint segments in a generally planar alignment and the ridge portion is thicker in a direction generally perpendicular to the generally planar alignment than a thickness of the bending beam without the ridge portion; and

the clip presenting at least two expansion engagement structures adapted for engaging the force application members such that the force application members of the

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applicator may be used to apply a force to the clip to distort it from the relaxed position to the stressed position; and

wherein the surgical clip is formed substantially of a bioabsorbable material, whereby the surgical clip is absorbed by a living tissue over a period of time.

2. (Original) The surgical clip of claim 1, the constraint segments each comprising a piercing portion sufficiently sharp to pierce the tissue.
3. (Original) The surgical clip of claim 1, in which the bending beam has a generally curved shape when in the relaxed position.
4. (Withdrawn) The surgical clip of claim 1, in which the engagement structures comprise bores into the clip and the force application members comprise pins.
5. (Withdrawn) The surgical clip of claim 4, the bores each having an axis, the constraint segments lying in a common plane in which the axis of the bores is generally orthogonal to the plane.
6. (Withdrawn) The surgical clip of claim 4, the bores each having an axis, the constraint segments lying in a common plane in which the axis of the bores is generally parallel to the plane.

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7. (Withdrawn) The surgical clip of claim 4, the bores each having an axis, the constraint segments lying in a common plane in which the axes of the bores is generally coincident with the plane.
8. (Withdrawn) The surgical clip of claim 4, the bores each having an axis, in which the axes of the bores are coaxial with one another when the clip is in the relaxed state.
9. (Cancelled).
10. (Withdrawn) The surgical clip of claim 1, in which the bending beam is offset from the two constraint segments.
11. (Original) The surgical clip of claim 1, in which the engagement structures are proximate the juncture between the bending beam and the constraint segments.
12. (Withdrawn) The surgical clip of claim 1, in which the engagement structures are at a fixed location on the surgical clip.
- 13-14. (Cancelled)
15. (Currently Amended) A surgical clip for retaining tissue and for delivery by an applicator of type having one or more force application members, the clip comprising:

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means for resiliently returning to a relaxed position after deformation having two ends and a sufficient shape memory to return to a relaxed position after being forcibly distorted to a stressed position;

at least two means for constraining tissue coupled at each end of the resilient return means, the constraining means being sufficiently rigid to retain the tissue when the resilient return means returns to the relaxed position;

a ridge portion defined on the resilient return means such that the bending beam deforms from the stressed position to the relaxed position while retaining the at least two constraint segments in a generally planar alignment and the ridge portion is thicker in a direction generally perpendicular to the generally planar alignment than a thickness of a remainder of the resilient return means;

the clip presenting at least two means for mating with the force application members such that the applicator may be used to apply a force to the clip to distort it from the relaxed position to the stressed position; and

wherein the surgical clip is formed substantially of a bioabsorbable material, whereby the surgical clip is absorbed by a living tissue over a period of time.

16. (Original) The surgical clip of claim 15, the constraining means each comprising a piercing portion sufficiently sharp to pierce the tissue.

17-22. (Cancelled)

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23. (Original) The surgical clip of claim 15, in which the resilient return means has a generally curved shape when in the relaxed position.

24. (Currently Amended) A surgical clip for retaining tissue and for delivery by an applicator of type having one or more force application members, the clip comprising:

a bending beam having two ends and a sufficient shape memory generally return to a relaxed position and to hold the tissue together after being forcibly distorted to a stressed position;

at least two constraint segments having one end thereof operably coupled to a respective end of the bending beam, the constraint segments being sufficiently rigid to retain the tissue when the bending beam returns to the relaxed position;

a ridge portion defined on the bending beam such that the bending beam deforms from the stressed position to the relaxed position while retaining the at least two constraint segments in a generally planar alignment and the ridge portion is thicker in a direction generally perpendicular to the generally planar alignment than a thickness of the bending beam without the ridge portion;

the clip presenting at least two expansion engagement structures on fixed locations on the clip adapted to engage the force application members such that the force application members of the applicator may be used to apply a force to the clip to distort it from the relaxed position to the stressed position; and

wherein the surgical clip is formed substantially of a bioabsorbable material, whereby the surgical clip is absorbed by a living tissue over a period of time.

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25. (Original) The surgical clip of claim 24, the constraint segments each comprising a piercing portion sufficiently sharp to pierce the tissue.

26. (Original) The surgical clip of claim 24, in which the bending beam has a generally curved shape when in the relaxed position.

27-33. (Cancelled)

34. (Original) The surgical clip of claim 24, in which the engagement structures are proximate the juncture between the bending beam and the constraint segments.

35. (Currently Amended) A surgical clip for retaining tissue and for delivery by an applicator of type having one or more force application members, the clip comprising:

a bending beam having two ends and a sufficient shape memory generally return to a relaxed position and to hold the tissue together after being forcibly distorted to a stressed position;

at least two constraint segments having one end thereof operably coupled to a respective end of the bending beam, the constraint segments being sufficiently rigid to retain the tissue when the bending beam returns to the relaxed position;

a ridge portion defined on the bending beam such that the bending beam deforms from the stressed position to the relaxed position while retaining the at least two constraint segments in a generally planar alignment and the ridge portion is thicker in a

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direction generally perpendicular to the generally planar alignment than a thickness of the bending beam without the ridge portion:

the clip presenting at least two expansion engagement structures located proximate the ends of the bending beam and proximate the ends of the constraint segments, the expansion engagement structures adapted to mate with the force application members such that the force application members of the applicator may be used to apply a force to the clip to distort it from the relaxed position to the stressed position; and

wherein the surgical clip is formed substantially of a bioabsorbable material, whereby the surgical clip is absorbed by a living tissue over a period of time.

36. (Original) The surgical clip of claim 35, the constraint segments each comprising a piercing portion sufficiently sharp to pierce the tissue.

37. (Original) The surgical clip of claim 35, in which the bending beam has a generally curved shape when in the relaxed position.

38. (Withdrawn) The surgical clip of claim 35, in which the engagement structures comprise bores into the clip and the force application members comprise pins.

39. (Withdrawn) The surgical clip of claim 37, the bores each having an axis, the constraint segments lying in a common plane in which the axis of the bores is generally orthogonal to the plane.

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40. (Withdrawn) The surgical clip of claim 37, the bores each having an axis, the constraint segments lying in a common plane in which the axis of the bores is generally parallel to the plane.

41. (Withdrawn) The surgical clip of claim 37, the bores each having an axis, the constraint segments lying in a common plane in which the axes of the bores is generally coincident with the plane.

42. (Withdrawn) The surgical clip of claim 37, the bores each having an axis, in which the axes of the bores are coaxial with one another when the clip is in the relaxed state.

43. (Cancelled)

44. (Withdrawn) The surgical clip of claim 35, in which the bending beam is offset from the two constraint segments.

Please add new claims 45-47 as follows:

45. (New) A surgical clip for retaining tissue and for delivery by an applicator of type having one or more force application members, the clip comprising:

a bending beam having two ends and a sufficient shape memory to generally return to a relaxed position and to hold the tissue together after being forcibly distorted to a stressed position;



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at least two constraint segments having one end thereof operably coupled to a respective end of the bending beam, the constraint segments being sufficiently rigid to retain the tissue when the bending beam returns to the relaxed position; and

a ridge portion defined on the bending beam such that the bending beam deforms from the stressed position to the relaxed position while retaining the at least two constraint segments in a generally planar alignment and the ridge portion is thicker in a direction generally perpendicular to the generally planar alignment than a thickness of the bending beam without the ridge portion; and

the clip being adapted to engage with the force application members such that the force application members of the applicator may be used to apply a force to the clip to distort it from the relaxed position to the stressed position;

wherein the surgical clip is formed substantially of a bioabsorbable material, whereby the surgical clip is absorbed by a living tissue over a period of time.

46. (New) The surgical clip of claim 45, wherein the constraint segments each comprise a piercing portion sufficiently sharp to pierce the tissue.
47. (New) The surgical clip of claim 45, in which the bending beam has a generally curved shape when in the relaxed position.